Fuels and Fire Behavior Advisory

Arizona and New Mexico

June 16th 2013

Subject: Persistent multi-year drought across much of New Mexico and Arizona has dropped fuel moistures to critically low levels in the large dead and live foliar fuels. These critically low fuel moistures increase available fuel loading which contributes to and supports active crown fire in timber fuels when critical fire weather is present.

Discussion: The multi-year drought has reduced the fine fuel loading across most of the region so the focus for this advisory will be the timber fuels within the region.

Difference from normal conditions: Drought creates more available fuel in timber fuel types which will increase fire intensities, crown fire potential and difficulty of control for fire suppression resources. Short duration rain events provide only short term fuel moisture improvement in timber litter fuels (1, 10, and 100 hour dead fuels). Fuels rebound quickly to previous dryness levels. **Short duration rain events provide no fuel moisture recovery in large dead and live foliar fuels.**

Concerns to Firefighters and the Public:

- Surface fire will quickly transition to crown fire and only requires low to moderate surface fire intensity to transition.
- Active/running crown fire has produced long range spotting up to one mile under the influence of an unstable atmosphere.
- Active fire behavior can extend well into night and early morning hours even with moderate RH recovery.
- Thunderstorm activity will create a mosaic pattern of surface fuel moistures. Surface fire intensity and fire behavior may change abruptly when fires cross these boundaries of moist and dry surface fuels.

Mitigation Measures:

- Local briefings need to be thorough and highlight specific fire environment conditions. These include but are not limited to local weather forecasts, Pocket Cards, ERC's, live and dead fuel moistures, and special fuel conditions such as drought and insect mortality
- Lookouts, both on the ground and in the air, can help identify the initiation and location of crown fire. They can also provide the location of resultant spot fires from active crown fire.
- Firefighters should acknowledge that fire growth and fire behavior they encounter this year may exceed anything they have experienced before due to the drought factor. Normal strategies and tactics may need to be adjusted to account for the drought factor.

Area of Concern: Please reference the map posted on the National Fuel Advisory Page.
http://www.predictiveservices.nifc.gov/fuels_fire-danger/fuels_fire-danger.htm

The timber fuels within this area of concern are the target for this fire behavior advisory.